

Figure 1. Structure of Components

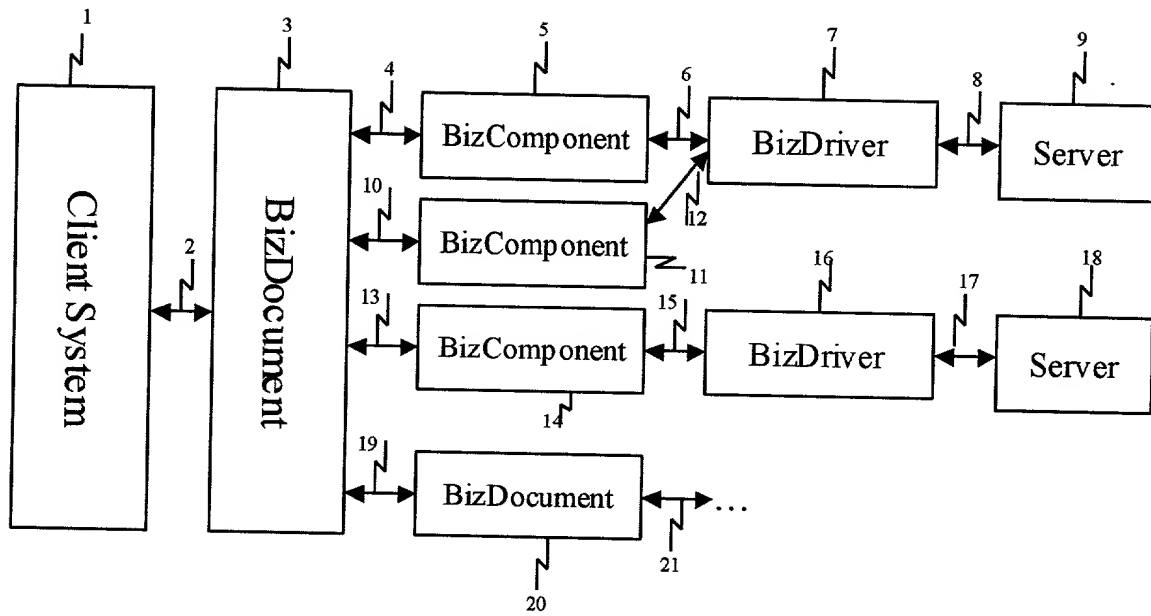


Figure 2. Operation

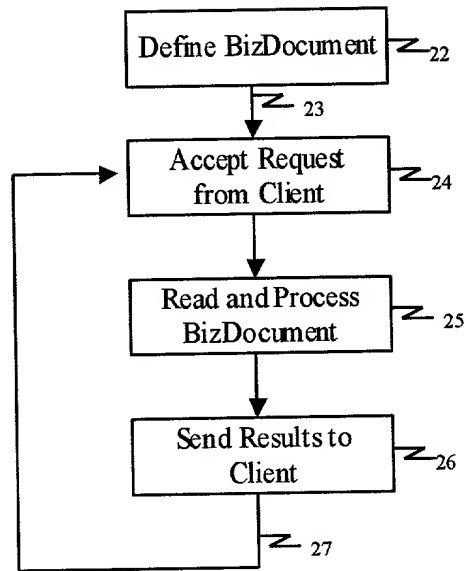


Figure 3, XML Purchase Order List

```

1 File: Generate_POList.xbd
2 <?xml version="1.0" encoding="UTF-8"?>
3 <?xml:stylesheet type="text/xsl" href="OrderSummary.xsl"?>
4 <PurchaseOrderList>
5   <PurchaseOrder PONumber="6080">
6     <Header>
7       <fromCust acct="ALFKI"/>
8       <acctRep>5</acctRep>
9       <OrigDate>6/13/2000</OrigDate>
10      <RequiredDate>05/20/2000</RequiredDate>
11    </Header>
12    <ShipTo>
13      <company>Simple Nutrition</company>
14      <address1>4585 Granby</address1>
15      <city>Colorado Springs</city>
16      <stateProvince>CO</stateProvince>
17      <country>USA</country>
18      <postalCode>80919</postalCode>
19    </ShipTo>
20    <Items>
21      <Item>
22        <product>Tofu</product>
23        <prodno>14</prodno>
24        <unitprice>23.25</unitprice>
25        <qty>2</qty>
26        <discount>0.05</discount>
27      </Item>
28      <Item>
29        <product>Chai</product>
30        <prodno>1</prodno>
31        <unitprice>18</unitprice>
32        <qty>3</qty>
33        <discount>0.10</discount>
34      </Item>
35    </Items>
36  </PurchaseOrder>
37 </PurchaseOrderList>

```

Figure 4, Dynamic Message Creation

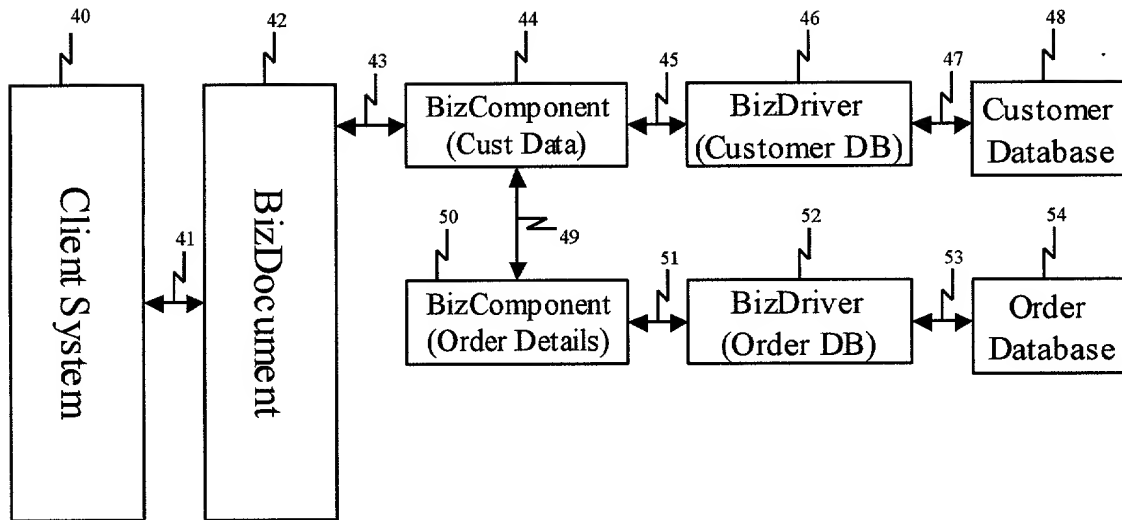


Figure 5, Purchase Order List BizDocument

```
1 File: Generate_POList.xbd
2 <?xml version="1.0" encoding="UTF-8"?>
3 <?xml:stylesheet type="text/xsl" href="OrderSummary.xsl"?>
4 <PurchaseOrderList>
5   <INPUT>
6     <PARAM _NAME="cust"
7       _DEFAULT="A%"
8       _DESC="filter for names of the customers to query on"
9       Datatype="string"/>
10    <DESC>generate a list of purchase orders for a given set of customers</DESC>
11  </INPUT>
12  <PurchaseOrder _VISIBLE="NO"
13    _BIZCOMP="GetPurchaseOrder.xbc"
14    custName="%%cust"/>
15 </PurchaseOrderList>
```

Figure 6, Purchase Order Retrieval BizComponent

```

1 File: GetPurchaseOrder.xbc
2 <SQL _BIZDRIVER="anchorxa_odbc.xdr"
3     _BIZCOMPTYPE="SQL"
4     _DEFAULT_NAME="PurchaseOrder">
5     <INPUT>
6         <PARAM _NAME="custName"
7             _DESC="cust name to filter on"
8             Datatype="string"/>
9         <DESC>generate list of purchase orders</DESC>
10    </INPUT>
11    <PurchaseOrder>SELECT CUSTOMERS.COMPANYNAME, ORDERS.ORDERID, ORDERS.CUSTOMERID,
12    ORDERS.ORDERDATE, ORDERS.REQUIREDDATE, ORDERS.SHIPNAME, ORDERS.SHIPADDRESS,
13    ORDERS.SHIPCITY, ORDERS.SHIPREGION, ORDERS.SHIPPOSTALCODE, ORDERS.SHIPCOUNTRY FROM
14    CUSTOMERS INNER JOIN ORDERS ON CUSTOMERS.CUSTOMERID = ORDERS.CUSTOMERID WHERE
15    CUSTOMERS.COMPANYNAME like '%%custName' </PurchaseOrder>
16    <_ROW_TEMPLATE>
17        <PurchaseOrder PONumber="%%ORDERID">
18            <Header>
19                <fromCust acct="%%CUSTOMERID"/>
20                <acctRep>5</acctRep>
21                <OrigDate>%%ORDERDATE</OrigDate>
22                <RequiredDate>%%REQUIREDDATE</RequiredDate>
23            </Header>
24            <ShipTo>
25                <company>%%SHIPNAME</company>
26                <address1>%%SHIPADDRESS</address1>
27                <city>%%SHIPCITY</city>
28                <stateProvince>%%SHIPREGION</stateProvince>
29                <country>%%SHIPCOUNTRY</country>
30                <postalCode>%%SHIPPOSTALCODE</postalCode>
31            </ShipTo>
32            <Items>
33                <Item _VISIBLE="NO"
34                    _BIZCOMP="GetItems.xbc"
35                    OrderID="%%ORDERID"/>
36            </Items>
37        </PurchaseOrder>
38    </_ROW_TEMPLATE>
39 </SQL>

```

Figure 7, Customer Database BizDriver

```
1  File: anchorxa_odbc.xdr
2  <SQL _BIZDRIVERTYPE="ODBC">
3    <INPUT>
4      <PARAM _NAME="user"
5        _DEFAULT="smith"
6        _DESC="user name on Oracle"
7        Datatype="string"/>
8      <PARAM _NAME="password"
9        _DEFAULT="password"
10       _DESC="password for this user"
11       Datatype="string"/>
12    </INPUT>
13    <DBDEFINITION
14      _SQL_SYNTAX="ORACLE">ODBC;DSN=ANCHORXA;UID=%user;PWD=%password;DBQ=anchorxa;DBA=W;APA=T
15      ;FEN=T;QTO=T;FRC=10;FDL=10;LOB=T;RST=T;FRL=F;MTS=F;CSR=F;PFC=10;TLO=0;</DBDEFINITION>
16  </SQL>
```

Figure 8, Order Item Retrieval BizComponent

```
1 File: GetItems.xbc
2 <SQL _BIZDRIVER="OrderDetails.xdr"
3     _BIZCOMPTYPE="SQL"
4     _DEFAULT_NAME="Item">
5     <INPUT>
6         <PARAM _NAME="OrderID"
7             _DESC="ID of the order to pull items for"
8             Datatype="int"/>
9         <DESC>get order details, convert to XML items</DESC>
10    </INPUT>
11    <Item>SELECT Products.ProductName, Items.OrderID, Items.ProductID, Items.UnitPrice,
12    Items.Quantity, Items.Discount FROM Products INNER JOIN Items ON Products.ProductID =
13    Items.ProductID WHERE Items.OrderID = %%OrderID </Item>
14    <_ROW_TEMPLATE>
15        <Item>
16            <product>%%ProductName</product>
17            <prodno>%%ProductID</prodno>
18            <unitprice>%%UnitPrice</unitprice>
19            <qty>%%Quantity</qty>
20            <discount>%%Discount</discount>
21        </Item>
22    </_ROW_TEMPLATE>
23 </SQL>
```



Figure 9, Order Detail BizDriver

```
1 File: OrderDetails.xdr
2 <SQL _BIZDRIVERTYPE="DAO">
3   <DBDEFINITION>C:\Dev\XATest\OracleOrders\OrderItems.mdb</DBDEFINITION>
4 </SQL>
```

Figure 10, Dynamic Message Processing

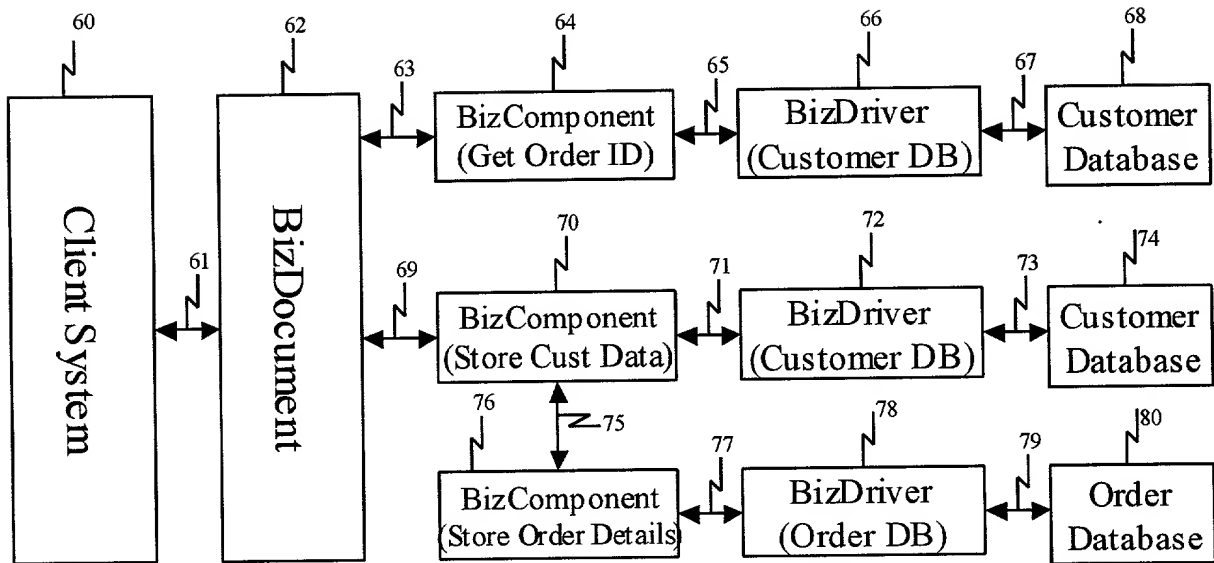


Figure 11, Dynamic Message Processing BizDocument

```
1 File: Store_POList.xbd
2 <?xml version="1.0" encoding="UTF-8"?>
3 <PurchaseOrderList>
4   <OrderID _VISIBLE="NO"
5     _BIZCOMP="NewOracleID.xbc"/>
6   <PurchaseOrder _VISIBLE="NO"
7     _BIZCOMP="PurchaseOrder.xbc"
8     _INPUT="//PurchaseOrderList/PurchaseOrder"
9     OrderID="%%../OrderID"/>
10 </PurchaseOrderList>
```

Figure 12a, Purchase Order Processing BizComponent

```

1  File: PurchaseOrder.xbc
2  <SQL _BIZCOMPTYPE="SQL"
3      _DEFAULT_NAME="PurchaseOrder">
4      <INPUT>
5          <PARAM _NAME="OrderID"
6              Datatype="int"/>
7      </INPUT>
8      <_BIZDRIVER _BIZDRIVER="anchorxa_odbc.xdr"
9          user="smith"
10         password="password"/>
11     <SQL _TABLE="ORDERS"
12         _OPER="INSERT">SELECT ORDERS.ORDERID, ORDERS.CUSTOMERID, ORDERS.ORDERDATE,
13     ORDERS.REQUIREDDATE, ORDERS.SHIPNAME, ORDERS.SHIPADDRESS, ORDERS.SHIPCITY,
14     ORDERS.SHIPREGION, ORDERS.SHIPPOSTALCODE, ORDERS.SHIPCOUNTRY &#xa;FROM ORDERS &#xa;</SQL>
15     <_ROW_TEMPLATE>
16         <PurchaseOrder PONumber="6080">
17             <Header>
18                 <fromCust acct="ALFKI"/>
19                 <acctRep>5</acctRep>
20                 <OrigDate>6/13/2000</OrigDate>
21                 <RequiredDate>05/20/2000</RequiredDate>
22             </Header>
23             <ShipTo>
24                 <company>Simple Nutrition</company>
25                 <address1>4585 Granby</address1>
26                 <city>Colorado Springs</city>
27                 <stateProvince>CO</stateProvince>
28                 <country>USA</country>
29                 <postalCode>80919</postalCode>
30             </ShipTo>
31             <Items>
32                 <Item _VISIBLE="NO"
33                     _BIZCOMP="StoreItem.xbc"
34                     _INPUT="../Item"
35                     OrderID="%OrderID"/>
36             </Items>
37         </PurchaseOrder>
38     </_ROW_TEMPLATE>
39     <_ROW_CONVERT>
40         <PurchaseOrder PONumber="6080">
41             <Header>
42                 <fromCust acct="ALFKI"/>
43                 <acctRep>5</acctRep>
44                 <OrigDate>6/13/2000</OrigDate>

```

Figure 12b, Purchase Order Processing BizComponent

```

1      <RequiredDate>05/20/2000</RequiredDate>
2  </Header>
3  <ShipTo>
4      <company>Simple Nutrition</company>
5      <address1>4585 Granby</address1>
6      <city>Colorado Springs</city>
7      <stateProvince>CO</stateProvince>
8      <country>USA</country>
9      <postalCode>80919</postalCode>
10 </ShipTo>
11 <Items>
12     <Item>
13         <product>Tofu</product>
14         <prodno>14</prodno>
15         <unitprice>23.25</unitprice>
16         <qty>2</qty>
17         <discount>0.05</discount>
18     </Item>
19     <Item>
20         <product>Chai</product>
21         <prodno>1</prodno>
22         <unitprice>18</unitprice>
23         <qty>3</qty>
24         <discount>0.10</discount>
25     </Item>
26 </Items>
27 </PurchaseOrder>
28 </_ROW_CONVERT>
29 <_COLUMN_MAP>
30     <ORDERID Datatype="int">%%OrderID</ORDERID>
31     <CUSTOMERID>%%/PurchaseOrder/Header/fromCust@acct</CUSTOMERID>
32     <ORDERDATE Datatype="literal">to_date('%%/PurchaseOrder/Header/OrigDate',
33 'MM/DD/YY')</ORDERDATE>
34     <REQUIREDDATE Datatype="literal">to_date('%%/PurchaseOrder/Header/RequiredDate',
35 'MM/DD/YY')</REQUIREDDATE>
36     <SHIPNAME>%%/PurchaseOrder/ShipTo/company</SHIPNAME>
37     <SHIPADDRESS>%%/PurchaseOrder/ShipTo/address1</SHIPADDRESS>
38     <SHIPCITY>%%/PurchaseOrder/ShipTo/city</SHIPCITY>
39     <SHIPREGION>%%/PurchaseOrder/ShipTo/stateProvince</SHIPREGION>
40     <SHIPPOSTALCODE>%%/PurchaseOrder/ShipTo/postalCode</SHIPPOSTALCODE>
41     <SHIPCOUNTRY>%%/PurchaseOrder/ShipTo/country</SHIPCOUNTRY>
42 </_COLUMN_MAP>
43 </SQL>

```

Figure 13, Order Item Processing BizComponent

```

1  File: StoreItem.xbc
2  <SQL _BIZDRIVER="OrderDetails.xdr"
3      _BIZCOMPTYPE="SQL"
4      _DEFAULT_NAME="Item">
5      <INPUT>
6          <PARAM _NAME="OrderID"
7              _DESC="order ID to associate to these items"
8              Datatype="int"/>
9          <DESC>store XML items into the database</DESC>
10     </INPUT>
11     <SQL _TABLE="ITEMS"
12         _OPER="INSERT">SELECT Items.OrderID, Items.ProductID, Items.UnitPrice,
13 Items.Quantity, Items.Discount &#xa;FROM Items &#xa;</SQL>
14     <_ROW_TEMPLATE>
15         <Item>
16             <product>Tofu</product>
17             <prodno>14</prodno>
18             <unitprice>23.25</unitprice>
19             <qty>2</qty>
20             <discount>0.05</discount>
21         </Item>
22     </_ROW_TEMPLATE>
23     <_ROW_CONVERT>
24         <Item>
25             <product>Tofu</product>
26             <prodno>14</prodno>
27             <unitprice>23.25</unitprice>
28             <qty>2</qty>
29             <discount>0.05</discount>
30         </Item>
31     </_ROW_CONVERT>
32     <_COLUMN_MAP>
33         <OrderID Datatype="int">%%OrderID</OrderID>
34         <ProductID>%%/Item/prodno</ProductID>
35         <UnitPrice>%%/Item/unitprice</UnitPrice>
36         <Quantity>%%/Item/qty</Quantity>
37         <Discount>%%/Item/discount</Discount>
38     </_COLUMN_MAP>
39 </SQL>

```

Figure 14, New OrderID BizComponent

```
1 File: NewOracleID.xbc
2 <SQL _BIZCOMPTYPE="SQL"
3     _DEFAULT_NAME="OrderID">
4     <INPUT/>
5     <_BIZDRIVER _BIZDRIVER="C:\Dev\XATest\OracleOrders\anchorxa_odbc.xdr"
6         user="smith"
7         password="password"/>
8     <OrderID _VISIBLE="NO">select trunc(NewOrderNumber.nextval) from dual</OrderID>
9     <_ROW_TEMPLATE>
10         <ROW>
11             <OrderID>%1</OrderID>
12         </ROW>
13     </_ROW_TEMPLATE>
14 </SQL>
```